

Title (en)
Detecting propellant levels in spacecraft

Title (de)
Erkennung von Treibstoffständen in einem Raumfahrzeug

Title (fr)
Détection de niveaux de propulseur dans un véhicule spatial

Publication
EP 2769918 A1 20140827 (EN)

Application
EP 13275043 A 20130226

Priority
EP 13275043 A 20130226

Abstract (en)
A propellant tank assembly (100) for a spacecraft comprises a body (101) for containing propellant, and a plurality of tomography elements (201) disposed around the body (101) for detecting a distribution of the propellant inside the body (101). In an embodiment, the propellant tank body (101) includes a propellant management device (110) inside the body (101) and the tomography elements (201) are disposed in proximity to the propellant management device (110). Tomography data can be obtained from the plurality of tomography elements (201), and a distribution of propellant within the propellant tank body (101) can be determined based on the obtained tomography data. When the plurality of tomography elements (201) are thermal tomography elements including a plurality of temperature-control elements, the temperature-control elements can be controlled to redistribute the propellant inside the propellant tank body by heating and/or cooling the propellant.

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CPC (source: EP US)
B64G 1/402 (2013.01 - US); **B64G 1/4021** (2023.08 - EP); **F02K 9/605** (2013.01 - EP US); **G01F 23/288** (2013.01 - EP US); **F05D 2270/303** (2013.01 - EP US)

Citation (search report)
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